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(54) **FIBER OPTIC CURVATURE SENSOR FOR TOWED HYDROPHONE ARRAYS**

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(57) **ABSTRACT**

The present invention relates to a system for sensing the curvature of a towed hydrophone array and a curvature sensor used in the system. The system has at least two curvature sensors positioned along the length of the array. Each of the curvature sensors comprises a bend member which bends as the array bends, at least one optical fiber within the bend member, and at least one detection device embedded within the at least one optical fiber to detect a change in the strain in the at least one optical fiber.

33 Claims, 3 Drawing Sheets